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CHROMOSOME NUMBERS OF WEST AFRICAN ALOES

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Abstract

Chromosome counts are reported for the four taxa in the genus *Aloe* occurring in West Tropical Africa, and for one related taxon from Uganda. In all cases the somatic number was found to be 2n=14.

Uittreksel

CHROMOSOME GETALLE VAN WES-AFRIKAANSE ALOES. Chromosoom tellings vir vier taxa van die geslag *Aloe* wat in Wes-Tropiese-Afrika voorkom asook een verwante taxon van Uganda. In alle gevalle was die somatiese chromosoom getal 2n=14.

Previous work has shown that the genus *Aloe* is quite uniform cytologically. Apart from the polyploid *A. ciliaris* Haw. and certain irregularities reported in plants of *A. vera* L. (Vig, 1968) and some other species (Sharma & Mallick, 1965), all species examined so far have a somatic chromosome number of 2n=14. In common with other members of the tribe *Aloineae* they have a characteristic diploid karyotype of eight long chromosomes and six short chromosomes (Fig. 1). Fewer than half of the species in this genus are native to South Africa, but almost all of the species examined cytologically are South African (Riley, 1959).

Four indigenous taxa are known in the area of the "Flora of West Tropical Africa" (Keay, 1968). Chromosome counts were obtained from collections of these as a preliminary to some experimental biosystematic studies. An exotic variety of one of these species, originally collected in Uganda, was also examined. Counts were obtained from root-tip preparations pretreated in 8-hydroxyquinoline, fixed in acetic alcohol, hydrolysed in HCl and squashed in acetocarmine. At least ten counts were obtained for each collection. Voucher specimens with the writer's collection numbers (Table 1) are in Kumasi University Herbarium **(KUM)**, Ghana, and clonal replicates are to be deposited in Kew Herbarium **(K)**, England and Legon University Herbarium **(GC)**, Ghana. Specimens of *Reynolds* 6724 are in **K** and **PRE** (Reynolds, 1966).

Results are shown in Table 2. All the material examined was found to have the same chromosome number as the majority of previously examined species,

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TABLE 1
Provenance of material examined

Collection number	Locality
	A. buettneri Berger
481	Kintampo, N. Ghana.
483	Sagadugu, N. Ghana.
484	Karamenga, N. Ghana.
485	Walewale, N. Ghana.
486	Tamale, N. Ghana.
497	Gushie, N. Ghana.
506	Funtua, N. Nigeria.
507	Zaria, N. Nigeria.
530	Batia, Atakora Mts., N. Dahomey.
	A. keayi Reynolds
171	[1]Oduponkpehe, Accra Plains, S. Ghana. (Type locality)
	A. macrocarpa Todaro var. *major* Berger
482	Nakpanduri, N. Ghana.[2]
516	Vom, Jos Plateau, N. Nigeria.
	A. schweinfurthii Baker var. *schweinfurthii*
487	Botianaw, Accra Plains, S. Ghana.
501	Otoase, nr. Nsawam, S. Ghana.
503	Savé, C. Dahomey.[3]
519	Jos, N. Nigeria.
522	Bauchi, N. Nigeria.
529	Tanguiéta, Atakora Mts., N. Dahomey.[3]
	A. schweinfurthii Baker var. *labworana* Reynolds
Reynolds 6724	Loyoroit, Labwor Hills, Uganda.

NOTES:

1. Correct spelling according to the Ghana Survey Department; Keay and Adams' spelling 'Odupoukpeehe', adopted by Reynolds, is presumably either an error or a vernacular variant.
2. New record for Ghana.
3. New record for Dahomey.

TABLE 2
Somatic chromosome counts

Taxon	No. of clones examined	2n=
A. buettneri Bgr.	9	14
A. keayi Reyn..	1	14
A. macrocarpa Tod. var. *major* Bgr.	2	14
A. schweinfurthii Bak. var. *schweinfurthii*	6	14
A. schweinfurthii Bak. var. *labworana* Reyn.	1	14

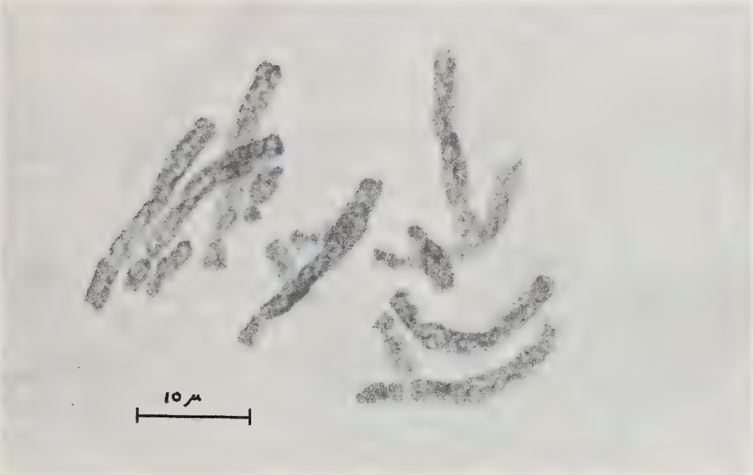

FIG. 1. Metaphase in root tip of *Aloe buettneri* (Newton 486)

viz. 2n=14. Although ten or more counts were obtained from each plant, no irregularities of the kind reported by Vig and by Sharma and Mallick were observed. According to Reynolds (1966) *A. buettneri* has the greatest geographical range of any species in this genus, extending over 3,500 miles. It is interesting to note that unlike many temperate plants, this species does not owe its extensive distribution to polyploidy.

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